

BASIC POWER AMPS



SPECIFICATIONS: A-30001

- Power Output: 365 watts RMS/channel, 20-20000 Hz
 IM Distortion (60 & 7000 Hz 4:1): less than 0.01%, 500 mW-365 watts
 Sensitivity: 1.5V RMS
 Input Impedance: 10K nominal
 Hum & Noise: less than 1mV (80 dB below 10 watts)
 Stability: unconditionally stable with any load or source impedance
 Controls: Gain & Crossover Mode (each channel), AC power switch
 Crossover Frequency: 250 Hz Standard, others on special order
 Protection: Tri-Tangential VI limiters (2), DC supply fuses (4), AC line fuse, thermal cutout breakers (2)
 Output Connectors: Five-way binding post
 Indicators: Pilot light, dual VU meters, dual proportional incandescent indicators
 Finish: Black & brushed anodized aluminum
 Size: 19 in.W x 8 in.H x 11½ in. D (fits standard 19 in. racks)
 Weight: 33 lbs.
 Price: \$1,195.00

SPECIFICATIONS: A-1800

- Power Output: 225 watts RMS/channel, 20-20000 Hz
 IM Distortion (60 & 7000 Hz 4:1): less than 0.01%, 500 mW-225 watts
 Sensitivity: 1.5V RMS
 Input Impedance: 10K nominal
 Hum & Noise: less than 1 mV (80 dB below 10 watts)
 Stability: unconditionally stable with any load or source impedance
 Controls: Gain (each channel), AC power switch
 Protection: Tri-Tangential VI limiters (2), DC supply fuses (4), AC line fuse, thermal cutout breakers (2)
 Output Connectors: Five-way binding post
 Indicators: Pilot light, LED indicators for 7% and 100% power (each channel)
 Finish: anodized aluminum, black with bright lettering
 Size: 19 in.W x 8 in.H x 11½ in. D (fits standard 19 in. racks)
 Weight: 33 lbs.
 Price: \$599.50



NOTE: In compliance with the FTC Power Amplifier Rule, all power output specifications are rated with both channels driven into 8 ohms, with less than 0.08% Total Harmonic Distortion.

Prices and specifications subject to change without notice.



BASIC POWER AMPS

POWERFUL enough to drive even the most inefficient loudspeakers to dramatic levels of distortion-free performance. Clean enough to bring out the full performance capabilities of the most sophisticated audiophile equipment. And rugged enough to be used night after grueling night by touring musicians and sound contractors.

Never before have these three sometimes contradictory design goals been achieved as successfully as in the new Cerwin-Vega A-1800 and A-3000 series of stereo power amplifiers. Developed through several years of intensive research and field testing, and backed by the Cerwin-Vega reputation for powerful performance and day-in, day-out reliability, these units are destined to become the new standard setters in their respective power classes.

Our engineers have observed carefully the special problems of past high power amplifier designs (particularly in the areas of stability, output protection, crossover notch distortion, and reactive load handling), and taken special steps to design circuits that are perhaps the most misbehavior-proof on the market today. The experience of building nearly a thousand units (both A-1800's and A-3000's) for the Sensurround (TM) equipment used with the film EARTHQUAKE provided much valuable data on further improving the stability, reliability, and serviceability of the circuitry.

The specifications of the A-1800 and A-3000 speak for themselves. Note particularly the extraordinarily low figure for IM distortion, which is generally recognized as correlating better with listening tests than any other type of nonlinearity (including harmonic distortion). The fact that this vanishingly low level of IM is maintained at fractional watt output levels is an indication of the absence of crossover notch (the principal cause of what is sometimes called "transistor edge"), and the sweet, open sound of the amplifiers at any listening level is all the confirmation your ears will need.

Other features of the A-3000 and A-1800 cannot be reduced to numbers. One is their extremely sophisticated protection circuit, perhaps the most advanced on the market. If loudspeakers always presented a purely resistive load to an amplifier, it would be a relatively simple matter to design a high power output stage protected from damaging levels of current. Unfortunately, all speakers (and particularly those with high energy motor assemblies such as our own) deviate considerably from an ideal resistive impedance, especially in the bass region where power requirements are greatest. These deviations produce out-of-phase current and voltage conditions that can easily damage an amplifier equipped only with current sensing protection circuits. Either the current sensors must be made extra sensitive (unnecessarily limiting the power into resistive loads), or a special circuit must be designed.

Cerwin-Vega's solution is a unique "Tri-Tangential" protection circuit, which continuously samples both current and voltage conditions in the output stage and compares them with the safe operating limits of the power transistors. Should these limits be exceeded, even for only a few microseconds, the drive signal is removed and the output stage shuts down until safe operation is once again possible. The result is maximum power into any resistive or reactive load, with total circuit protection. The smooth yet positive action of the protection apparatus is evident even with a purely reactive load at 20 kHz. The output waveform simply clips cleanly at the maximum safe current value, with no dangerous voltage spikes to damage components or garble the audio.

The A-3000 and A-1800 are as rugged mechanically as they are electronically. The A-3000 is built around a massive custom heat sink that provides structural support for the entire assembly as well as dissipating heat. Thus, with the exception of cover screens and front panel, every ounce of metal in the package does double duty, allowing the relatively compact unit to develop its very high power output without noisy cooling fans.

Both amplifiers incorporate a number of other advanced production techniques including plug-in drive circuitry, special high current circuit boards for power device interconnections (eliminating most hand wiring), and socket mounting of output transistors for fast, easy removal. Removal of a single cover screen exposes all internal adjustments and virtually all components to instant access, making service in the field a snap.

To meet the special requirements of professional users, both amplifiers are offered in special "11" packages. This option consists of a special front panel with dual professional size illuminated VU meters, and incandescent output indicators that flash to let you know the amplifier is functioning, even from across a large stage. In addition, all fuses are front panel accessible, and each channel is equipped with a switchable electronic crossover that can be set for Bass (below 250 Hz), Treble (above 250 Hz), or Flat response, 250 Hz being the optimum crossover point for biamped three or four way PA systems such as our own.

The newest addition to the Cerwin-Vega amplifier line is the revolutionary A-3000RS —the first audio power amplifier to use a regulated power supply. Its slightly deeper package includes a larger power transformer and the regulation circuitry, which allows it to maintain virtually constant power output at any AC line voltage between 110 and 130 volts. RMS power (8 ohms loads) with both channels driven goes up to 450 watts per channel, and with suitable forced air cooling, the A-3000RS will deliver over 750 watts per channel continuously into 4 ohms!

